

We claim:

1. A method of detaching a film of material from the surface of a substrate, the method comprising engaging an outlet of a fluid delivery device with an aperture in the substrate from the opposite side of the substrate to the surface to which the film is attached, and causing the fluid delivery device to pass a fluid out of the outlet and through the aperture to generate a detaching force between the film of material and the surface of a substrate adjacent to the aperture.
2. A method according to claim 1, further comprising inserting the fluid delivery device through the aperture from the opposite side of the substrate to which the film is attached, and pressing the fluid delivery device against the film to separate the film from the surface of the substrate adjacent to the aperture prior to passing the fluid through the aperture.
3. A method according to claim 1, wherein a retaining member is positioned against the film on one side of the aperture to cause the film to detach from the substrate on an opposite side of the aperture.
4. A method according to claim 1, wherein the aperture in the substrate is adjacent the edge portion of the first film.
5. Apparatus for detaching a film of material from a substrate, the apparatus comprising a holding device adapted to hold a substrate and a fluid delivery

device adapted to be coupled to a pressurised fluid source, the fluid delivery device comprising an outlet adapted to be engaged with an aperture in the substrate to deliver fluid from the pressurised fluid source through the aperture, and the fluid delivery device being movably mounted with respect to the holder
5 between an engaged position, in which the outlet engages with an aperture in a substrate held in the holder in use, and a disengaged position in which the outlet is disengaged from an aperture in a substrate mounted in the holder in use.

10 6. Apparatus according to claim 5, wherein the fluid delivery device further comprises sealing means to seal the outlet to the aperture when the fluid delivery device is in the engaged position.

7. Apparatus according to claim 5, wherein the outlet is adapted to be
15 inserted through the aperture.

8. A method of detaching a film of material from a surface of a substrate, the method comprising attaching a detachment member to the external surface of the film opposite to the surface of a substrate such that the attachment force
20 between the detaching member and the film is greater than the adhesion force between the film and the surface of a substrate, and moving the detachment member away from the surface of the substrate to cause the film to detach from the substrate.

9. A method according to claim 8, wherein the detachment member comprises a second film of material which is attached to the exposed side of the first film.

5 10. A method according to claim 9, wherein the second film is attached to the first film by an adhesive.

11. A method according to claim 10, wherein the second film comprises a layer of adhesive.

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12. A method according to claim 8, wherein the detachment member comprises a clamp device adapted to clamp onto an edge portion of the first film.

15 13. A method according to claim 12, wherein the clamp member comprises a wedge shaped member which is inserted between the first film and the substrate and a clamp member movable relative to the wedge shaped member to clamp the film between the wedge shaped member and the clamp member when the clamp member moves to a clamping position.

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14. A method according to claim 8, wherein the detachment member is moved away from the substrate at an oblique angle to the substrate to separate a first section of the film from the substrate, and is then moved substantially parallel to the substrate to remove the film from the substrate.

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5 15. Apparatus for removing a film of material from a surface of a substrate, the apparatus comprising a holder adapted to hold a substrate but not a film attached thereto and the holder holding the substrate in a holding plane, a clamp device comprising two clamp members movable with respect to each other between an open position and a closed position, and the clamp device being movably mounted with respect to the holder for movement between a disengaged position, a clamped position and a removed position; whereby, when a substrate is held in the holder in use, the clamp device, with the clamp members in the open position, is moved from the disengaged position to the
10 clamped position, in which the film is located between the clamp members, and when the clamp device is in the clamped position, the clamp members are moved to the closed position to clamp the film between the clamp members, and the clamp device is then moved from the clamped position to the removed position to remove the film from the substrate.

15 16. Apparatus according to claim 15, wherein the clamp device is movable with respect to the holder to a partially removed position between the clamped position and the removed position, the clamp device being movable at an oblique angle to the holding plane from the clamped position to the partially
20 removed position, and substantially parallel to the holding plane from the partially removed position to the removed position.

17. Apparatus according to claim 15, wherein one of the clamp members is wedge shaped.

18. Apparatus for removing a film of material from a surface of a substrate, the apparatus comprising a holder adapted to hold a substrate but not a film attached thereto and the holder holding the substrate in a holding plane, an applicator movably mounted with respect to the holder, a supply mechanism for supplying a removal material having an adhesive layer thereon to the applicator, and the applicator moving the removal material into contact with a film of material attached to a substrate held in the holder to apply the removal material to the film so that the adhesive layer adheres the removal material to the film, and means for pulling the removal material away from the holding plane to remove the removal material and the film from a substrate held in the holder.

19. Apparatus according to claim 18, wherein the removal material is an adhesive tape.

20. Apparatus according to claim 18, wherein the supply mechanism comprises a first drum from which the removal material is unwound for supply to the applicator.

21. Apparatus according to claim 18, further comprising a receiving mechanism to receive removal material and film removed from the substrate.

22. Apparatus according to claim 21, wherein the receiving mechanism comprises a second drum on to which the removed removal material and film is wound.

23. Apparatus according to claim 21, wherein the removal material is continuous between the supply mechanism and the receiving mechanism.

24. Apparatus according to any of claim 21, wherein the pulling means is provided by movably mounting one or both of the supply mechanism and the receiving mechanism with respect to the holder.

25. A method of removing a film of material from a substrate comprising engaging an outlet of a fluid delivery device with an aperture in the substrate from the opposite side of the substrate to the surface to which the film is attached, and causing the fluid delivery device to pass a fluid out of the outlet and through the aperture to generate a detaching force between the film of material and the surface of a substrate adjacent to the aperture, and attaching a detachment member to the film such that the attachment force between the detaching member and the film is greater than the adhesion force between the film and the surface of a substrate, and moving the detachment member away from the surface of the substrate to cause the film to detach from the substrate.

26. A method according to claim 25, wherein the detachment member is attached to the film before the fluid delivery device passes fluid through the aperture in the substrate.

27. A method according to claim 26, wherein the detachment member comprises a second film of material which is attached to the exposed side of the first film.

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28. A method according to any of claims 1, 4, 8 or 25, wherein the substrate is a substrate for mounting a semiconductor chip thereon.

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